R637. Natural Resources, Energy and Resource Planning.
R637-1. Utah Energy Saving Systems Tax Credit (ESSTC) Rules.
R637-1-1. Purpose.

(1) This rule establishes additional requirements and standards not defined in the statute which are necessary to be eligible for the Energy Saving Systems Tax Credit (ESSTC). For a complete description of eligibility requirements, this rule should be used in conjunction with Sections 59-7-611 and 59-10-601 through 59-10-604.

(2) This rule applies to systems completed and placed in service beginning on January 1, 1997.

(3) It is not the purpose of this rule to assess or assure the absolute value of a proposed energy system. Rather its purpose is to act as a guide for both the dealer and consumer in an effort to facilitate a better understanding of the law and proper use of the ESSTC, and to aid the consumer in making an informed choice regarding a proposed energy saving system.

R637-1-2. Authority.

(1) Pursuant to Section 59-7-611, the Office of Energy and Resource Planning may promulgate standards for residential and commercial energy systems that cover the safety, reliability, efficiency, leasing, and technical feasibility of the systems to ensure that the systems eligible for the tax credit use the state's renewable and nonrenewable energy resources in an appropriate and economic manner.

(2) Approval of the application implies that, based on the information presented by the applicant, the Office of Energy and Resource Planning believes that the energy system has been installed and is a viable system for saving energy or for the production of energy from renewable resources.

R637-1-3. Certification Process.

(1) A potential participant shall complete the formal application and submit it along with the requested receipts to the Office of Energy and Resource Planning.

(a) The required signatures on the formal application do not have to be original signatures.

(2) The Office of Energy and Resource Planning shall review the application and determine whether the system is accepted or denied for the tax credit program.

(3) If all provisions of this rule have been fulfilled, the Utah Office of Energy and Resource Planning shall certify a system.

(4) The Office of Energy and Resource Planning shall notify the applicant by mail of the decision made.

(5) If the application is approved, the applicant shall receive certification in the form of a TC-40E Utah tax form, partially completed by the Office of Energy and Resource Planning.

(6) The applicant can return this form along with other Utah tax forms to the Tax Commission for processing.

R637-1-4. General Rules for Eligibility.

New systems and upgrades of systems may be eligible for the credit; maintenance costs are not eligible for a tax credit.

R637-1-5. Eligible Systems.

(1) Alternative energy systems must comply with all applicable state, federal and local rules, regulations, codes and standards. This rule does not relieve the applicant of responsibility for such compliance.

(2) Alternative energy systems must produce more energy than they consume.

R637-1-6. Definitions.

(1) Most definitions used in this rule are defined in Sections 59-7-611 and 59-10-601.

(2) In addition:

(a) "Installer" means a person or persons who set up the system for actual use.

(b) "Loaded structure" means a part of the building that provides support to that building.

(c) "Heat transportation system" means all fans, vents, ducts, pipes and heat exchangers designed to move heat from collection point to either the storage or heat use area.

(d) "Thermal storage mass" means a structure within the conditioned space consisting of a material with high thermal capacitance or mass to provide heat to the unit at times of low or no heat collection.

(e) "Upgrade" means a device which extends the usefulness of, or raises the quality of, an existing system.

(f) "Solar surface" is a building wall which faces no more than 30 degrees away from true south measured in a horizontal plane.

R637-1-7. Certification Requirements.

(1) Systems must meet the applicable individual system requirements listed in R637-1-8.

(2) Because it is not the intent of this rule to inhibit or discourage individuals who wish to design their own energy saving systems, the Office of Energy and Resource Planning reserves the right to exempt an applicant from certain requirements or standards if the system's performance can be demonstrated and the system's simple payback is similar to commercially available systems.

R637-1-8. Individual System Requirements.

(1) Active Solar Thermal System Requirements

(a) For cost computation purposes the active solar thermal system ends at the interface between it and the conventional heating system. No part of the conventional heating system shall be eligible for the tax credit.

(b) In addition an active system must contain the following

components:

(i) solar collectors

(ii) storage system

(iii) a heat transferral system;

(2) Active Solar Electric (Photovoltaic) System Requirements

(a) For cost computation purposes the active solar electric system ends at the interface between it and the point of distribution.

(b) The cost of a solar photovoltaic system as a residential energy system or a commercial energy system providing electrical or mechanical power, including the cost of installation, design, modules, control systems, inverters, tracking systems and energy storage, may be eligible for the ESSTC provided it can be shown that the system provides more energy than it uses and is exposed to sunlight a minimum of six hours/day, subject to weather conditions.

(3) Passive Solar System Requirements

(a) Eligible for the ESSTC shall be the cost of any passive system, such as, a trombe wall, water wall, thermosyphon, solarium, direct gain, and any system that can be proven to collect, store and transport heat from the sun. The cost of ventilation, fans, movable insulation, louvers, overhangs and other shading devices shall be eligible provided that they are designed to be used as an integral part of the passive solar system and not part of the conventional building design.

(b) A solarium is eligible provided that it supplies heat to the living space of the house in conjunction with a thermal storage mass and a forced or natural convection heat transportation design. Solariums must also be designed to prevent heat loss at night by means of insulation devices as well as prevent summer overheating that can increase the load on the building's cooling system.

(c) Insulated windows and other glazing devices shall not be eligible unless they are part of a direct gain passive solar system which utilizes thermal mass storage and a passive or active heat transportation system to provide heating throughout the building. In addition, insulated windows and other glazing devices shall not be eligible unless they are oriented within 30 degrees of true south.

(d) No certification shall be given if the Office of Energy and Resource Planning concludes that the passive solar system does not supply heating when needed or allows more heat loss than gain in the winter months or overheating in the summer months. The passive system shall receive at least four hours of sunlight per day during the winter months of December through March, subject to weather conditions, and shall be primarily south facing.

(e) Heat transportation systems shall be eligible for the tax credit provided they are part of the passive solar design and would not be used in a conventional heating system.

(f) Thermal storage mass shall be eligible for the tax credit provided the mass is a non-loaded structure. Fifty percent of the cost of a loaded structure shall be eligible with the total thermal

mass portion of the tax credit. Thermal storage mass may not exceed 30 percent of the total tax credit.

(g) In addition, a passive system must contain the following components:

(i) a means to allow the solar energy to the unit;

(ii) an absorbing surface;

(iii) a thermal storage mass located within the conditioned space;

(iv) a heat transferral system;

(v) protection from summer overheating and excessive winter heat-loss;

(4) Wind Turbine System Requirements

(a) The cost of all DC/AC inverters, towers, storage devices, power lines, wind turbines/wind machines and the system installation and design shall be eligible for the ESSTC as a residential energy system or a commercial energy system providing either electrical or mechanical power by intercepting and converting wind energy and transferring this energy by a separate apparatus to the point of use or storage.

(b) All commercial wind energy systems for which the ESSTC is sought must:

(i) be backed by a written guarantee that assures the purchaser a full refund in the event that the system does not provide the minimum level of performance as claimed or stipulated by the seller.

(5) Hydro System Requirements

(a) The cost of all water power wheels, turbines, generators, transformers, power lines, penstocks, valves, drains, diversion structures, -- except storage dams, fish facilities, canals, meters for measurement of electricity or water, cost of design, installation and control equipment may be eligible for the ESSTC if the hydro system provides electrical or mechanical power by intercepting and converting kinetic water energy and transferring that energy by separate apparatus to the point of use or storage.

(6) Biomass System Requirements

(a) The costs associated with equipment, design and installation for a biomass energy saving system may be eligible for the ESSTC so long as the system provides more energy than it consumes. Conversion methods may include combustion, thermochemical, biochemical or photochemical. The biomass system must have a conversion system and a separate apparatus to transfer the converted energy to the point of use or storage. Wood stoves used for conventional heating purposes are excluded from ESSTC eligibility.

R637-1-9. Multiple Unit Eligibility Requirements.

If the credit is to be assigned to the users of the individual units, the following formula shall be used to calculate the amount of the credit the individual can take: 25% x v/V x C = TC

Where:

v = the volume of the individual unit.

V = the total volume of the entire unit using the alternative energy system.

C = the installed cost of the total system.

TC = the amount of tax credit to which the individual user is entitled.

R637-1-10. Installation Cost Requirements.

Detailed billing which includes reasonable time and associated costs of installation must be documented and submitted to the Office of Energy and Resource Planning along with the application and other requested receipts.

R637-1-11. Easement Cost Requirements.

Easement costs required to ensure solar access are eligible for the ESSTC.

R637-1-12. Design Cost Requirements.

Architectural or engineering design costs, system simulation costs, and system analysis costs necessary to balance or optimize system performance shall be eligible for the ESSTC if they are documented and provided that equipment is purchased and installed in conjunction with these services.

KEY: hydroelectric power, solar energy, wind power, tax credits
July 30, 1999 **59-7-611**
59-10-601 through 59-10-604